

•Work Order ID 100434

\*100434\*

Page 1

April-22-13 1:40:19 PM

Item ID: D3011-1

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Rappel

Start Date: 5/28/13 Start Qty: 6.00

\*6\*

Cust Item ID:

Required Date: 5/28/13 Req'd Qty: 6.00

\*6\*

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 13-04-23

Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D3011	Rev B
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100		0.00
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\*100\*

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut Blanks: 26.625"

ET 13-06-10 (83)

110

0.00

\*110\*

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

CPC 2013-06-11

3 0

Machine as per folio FA129

Folio Rev: AA

Dwg Rev: B

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											

FAULT CATEGORY				
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other	

Work Order ID 100434

\*100434\*

Page 2

April-22-13 1:40:19 PM

Item ID: D3011-1

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Rappel

Start Date: 5/28/13

Start Qty: 6.00

\*6\*

Cust Item ID:

Required Date: 5/28/13

Req'd Qty: 6.00

\*6\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

QC2- Inspect parts off machine FAI/FAIB

0.00

\*120\*

QC

Memo

0.00

Quality Control

JFC 2013-06-11

3

0

130

QC8- Inspect parts - second check

0.00

\*130\*

QC

Memo

0.00

Quality Control

and 13/06/13

3

0

131

0.00

\*131\*

Outsource2

Memo

0.00

Outsource process - NDT

1- LPI AS PER ASTM 1417 LEVEL 2 AS PER DWG d3011  
2- Certificate of conformity is required

CZ 13/06/18 (6)

P/O: 20226

Conts

P/O: 20314 CZ 13/06/25<sup>x3</sup> 13/6/19 (3)

Conts

3x SP 13-6-25.

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
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Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											
<b>FAULT CATEGORY</b>											
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other		

# Work Order ID 100434

\*100434\*

Page 3

April-22-13 1:40:19 PM

Item ID: D3011-1

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Rappel

Start Date: 5/28/13

Start Qty: 6.00

\*6\*

Cust Item ID:

Required Date: 5/28/13

Req'd Qty: 6.00

\*6\*

Customer:

Reference:

Run Start

\*NR1\*

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop

\*NR2\*

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

132

QC5- Inspect part completeness to step on W/O

0.00

\*132\*

QC

Memo

0.00

Quality Control

3

(DAS 05) 13-06-25

140

Chemical Conversion Coat per QSI005 4.1

0.00

\*140\*

HandFinish

Memo

0.00

Hand Finishing

3x f 13/06/26

150

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

\*150\*

Powdercoat

Memo

0.00

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

11-00  
32001  
11-30

3x f m-13/06/27

m125620

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
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Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
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Unapproved <input type="checkbox"/>											
<b>FAULT CATEGORY</b>											
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\*Work Order ID 100434

\*100434\*

Page 4

April-22-13 1:40:19 PM

Item ID: D3011-1

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Rappel

Start Date: 5/28/13

Start Qty: 6.00

\*6\*

Cust Item ID:

Required Date: 5/28/13

Req'd Qty: 6.00

\*6\*

Customer:

Reference:

Run Start \*NR1\*

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop \*NR2\*

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

160

QC3- Inspect Part Finish

0.00

\*160\*

QC

Memo

0.00

Quality Control

3x d ll 13/06/27

170

Identify as per dwg & Stock Location: 57/67

0.00

\*170\*

Packaging

Memo

0.00

Packaging

P 13/6/28 B

180

QC21- Final Inspection - Work Order Release

0.00

\*180\*

QC

Memo

0.00

Quality Control

13/7/27

MW 13-06-28

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
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Training <input type="checkbox"/>											
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<b>FAULT CATEGORY</b>											
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# Picklist Print

April-22-13 1:40:18 PM

Page 1

Work Order ID: 100434

Parent Item: D3011-1

Parent Item Name: Rappel

Start Date: 5/28/13

Required Date: 5/28/13

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP C02.05.09Added D6202 at step 2NG  
IPP Rev:D Added QC8 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6202 I-Beam Extrusion		Manufactured	No			110	f	23.4660	1	6			
						<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>			
						MAT028		23.466					
						<u>80109</u>		23.466					

~~2T 13-06-10~~

6.656

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
<b>Root Cause</b>	<b>Date</b>	<b>Step</b>	<b>Qty</b>	<b>Description of work order update or Non-conformance</b>	<b>Initial Chief Eng</b>	<b>Action Description</b>	<b>Sign &amp; Date</b>	<b>Verification</b>	<b>QC Inspector</b>		
Doc/Data <input type="checkbox"/>											
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DART AEROSPACE LTD		Work Order:	100434
Description: Rappel Slide Bar		Part Number:	D3011-1
Inspection Dwg: D3011-1 Rev: B		Page 1 of 1	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

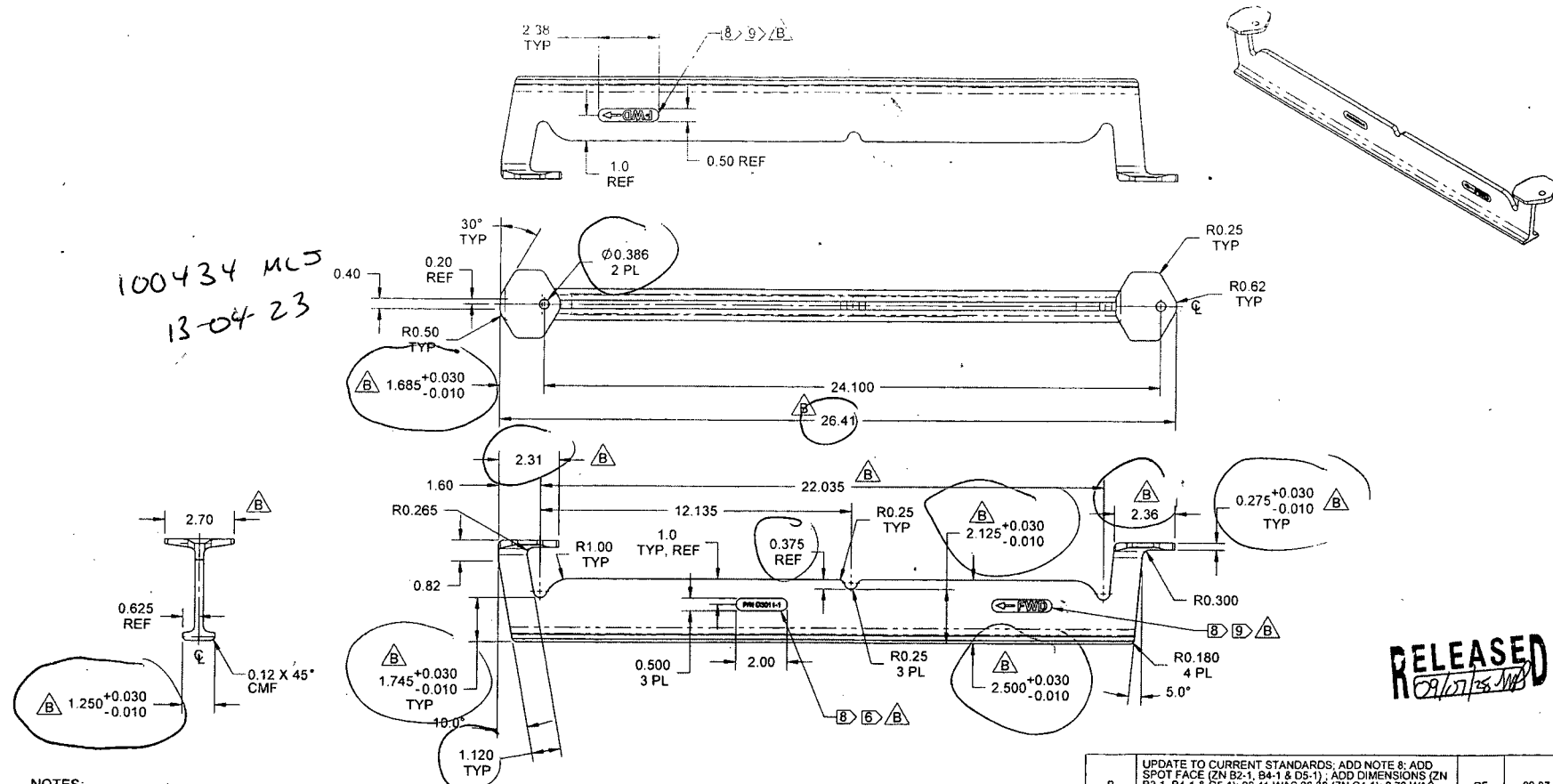
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
26.41	+/-0.030	26.41	✓		HG	31006
2.31	+/-0.030	2.306	✓		Caliper	OK-01
2.36	+/-0.030	2.356	✓		"	"
1.120	+0.030/-0.010	1.124	✓		MTC	OK-02
1.685	+0.030/-0.010	1.685	✓		Caliper	OK-01
1.745	+0.030/-0.010	1.756	✓		"	"
1.250	+0.030/-0.010	1.251	✓		"	"
2.500	+0.030/-0.010	2.505	✓		"	"
2.125	+0.030/-0.010	2.130	✓		"	"
0.275	+0.030/-0.010	0.285	✓		"	"
0.375	REF	0.367	✓		HG	31006
Ø0.386	+0.006/-0.001	0.386	✓		Caliper	OK-01

Measured by: JFC	Audited by: <i>[Signature]</i>	Prototype Approval:	N/A
Date: 2013-04-11	Date: 13/06/13	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	09.05.04	New Issue	KJ/DD	
B	09.09.14	Dimensions revised per Dwg Rev B	KJ	



100434 MLC  
13-04-23



- NOTES:**
- 1) MATERIAL: MANUFACTURE FROM D6202-027 EXTRUSION
  - 2) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1  
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: ENGRAVE P/N IN THIS AREA AS SHOWN (NEAR SIDE ONLY) TO MAX DEPTH OF 0.015 IN 0.19 HIGH LETTERS WITH A MIN RADIUS TOOL OF 0.015
  - 7) WEIGHT: 3.00 lbs
  - 8) SPOT FACE MAX DEPTH OF 0.010 PRIOR TO MARKING
  - 9) ENGRAVE "FWD" IN THIS AREA AS SHOWN TO MAX DEPTH OF 0.015 IN 0.38 HIGH LETTERS WITH MIN TOOL RADIUS OF 0.015
  - 10) LPI PER ASTM 1417 LEVEL 2

**D3011-1 RAPPEL SLIDE BAR**

B	UPDATE TO CURRENT STANDARDS; ADD NOTE 8; ADD SPOT FACE (ZN B2-1, B4-1 & D5-1); ADD DIMENSIONS (ZN B3-1, B4-1 & C5-1); 26.41 WAS 26.32 (ZN C4-1); 2.70 WAS 2.700 (ZN B7-1); ADD (+0.030/-0.010) TOLERANCES; ADD LPI (ZN A8-1)	RF	09.07.24
A	NEW ISSUE	CP	01.03.29
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF	DRAWING NO.	REV. B
CHECKED		D3011	SHEET 1 OF 1
MFG. APPR.		TITLE	SCALE
APPROVED		RAPPEL SLIDE BAR	NTS
DE APPR.		COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	09.07.24		





# LIQUID PENETRANT TEST REPORT

P- 15341

CLIENT	DART AEROSPACE	DATE	JUNE 15/2013	PAGE	1	OF	1	
ATTENTION	ANDY SHELTON	ACUREN JOB NO.	100-13-00122	TIME	AM	<input checked="" type="checkbox"/>	PM	<input type="checkbox"/>
ADDRESS	1270 ABENDEEN ST. HUNTSVILLE, AL	PO/NO NO.		WORK LOCATION	SAME			
PROJECT	FPI ON CROSS TUBES & RAPPELS	ACCEPTANCE STD.	ASPH 1417/038	REV./DATE	2005			
ITEM(S) EXAMINED	(4)		(3)					

JOB DESCRIPTION	PROCEDURE NO. LT-002	REV./DATE	2008	TECHNIQUE NO. LT-002	REV./DATE	2008
PART NO.	SEE RESULTS	MATERIAL	Aluminum	THICKNESS	VARIOUS	
SCOPE	A DYE FLUORESCENT DYE INSPECTION WAS COMPLETED ON THE 100% OF THE SURFACE ONLY					

## TEST DETAILS

METHOD	<input checked="" type="checkbox"/> FLUORESCENT	<input type="checkbox"/> VISIBLE	<input checked="" type="checkbox"/> WATER WASH	<input type="checkbox"/> SOLVENT REMOVABLE	<input type="checkbox"/> POST EMULSIFIED	
FAMILY BRAND	4750-3FLUX		BLACK LIGHT S/N	16457	<input type="checkbox"/> OUTPUT > 1000 $\mu$ W/CM <sup>2</sup>	<input type="checkbox"/> AMBIENT < 2 fc
PENETRANT	2L67	MINIMUM DWELL TIME	4510	MIN.	LIGHTING EQUIP.	<input type="checkbox"/> FLASHLIGHT <input type="checkbox"/> TROUBLELIGHT <input type="checkbox"/> OUTPUT > 100 fc @ SURFACE
PENETRANT REMOVER	1410	MINIMUM DRY TIME	>10	MIN.	OTHER	LAPING
DEVELOPER	SKS 52	MINIMUM DWELL TIME	10	MIN.	LIGHT METER S/N	
DEVELOPER TYPE	<input checked="" type="checkbox"/> NON AQUEOUS	<input type="checkbox"/> AQUEOUS	<input type="checkbox"/> DRY		CAL DUE DATE	

## TEST SURFACE

SURFACE CONDITION	<input type="checkbox"/> AS GROUND	<input type="checkbox"/> AS WELDED	<input checked="" type="checkbox"/> MACHINED	<input type="checkbox"/> SHOT BLASTED	<input checked="" type="checkbox"/> CLEAN BARE METAL
SURFACE TEMPERATURE	<input type="checkbox"/> < -4°C/ 20°F	<input type="checkbox"/> -4°C/ 20°F TO 10°C/ 50°F	<input checked="" type="checkbox"/> 10°C/ 50°F TO 52°C/ 125°F	<input type="checkbox"/> > 52°C/ 125°F	

## RESULTS- ( ☐ METRIC ☒ IMPERIAL )

3 - W.O.# 100454 - RAPPEL CROSS TUBE W.O.# 1 - " " 102423 ✓ 3 - " " 101586 ✓ 1 - " " 101585 ✓ 1 - " " 99662 ✓	INDICATIONS ON 3 Pcs
--	----------------------

**Scope of Services**  
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

**Standard of Care**  
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

## SIGNATURES

CLIENT REPRESENTATIVE	Andy Shelton	PRINT	AShelton	SIGNATURE	DTR #	E-20381	
TECHNICIAN (SIGNATURE):					REPORT REVIEWED BY:		
NAME (PRINT):	Mike Zhus Zun	1 <sup>ST</sup> TECHNICIAN		2 <sup>ND</sup> TECHNICIAN	NAME	INITIALS	
CGSB LEVEL	II	SNT LEVEL		CGSB LEVEL		SNT LEVEL	
CGSB REG. NO.	6606			CGSB REG. NO.			

WHITE - CLIENT COPY

CANARY - OFFICE COPY

PINK - TECHNICIAN COPY

GOLD - OFFICE COPY

PT Sept 201







# LIQUID PENETRANT TEST REPORT

P- 15342

CLIENT DMT AeroSpace DATE JUNE 25/13 PAGE 1 OF 1  
ATTENTION MAT MURDOCH ACUREN JOB NO. 188-13-C0123 TIME AM ☒ PM ☐  
ADDRESS 1770 ABERDEEN POWO NO. 20314 WORK LOCATION SAME  
HAWKESBURY ON. ACCEPTANCE STD. ASTM 1417/038 REV./DATE 2005  
PROJECT F.P.I. on CROSS TUBES and machined PARTS  
ITEM(S) EXAMINED (4) (3)

JOB DESCRIPTION SEE RESULTS PROCEDURE NO. LT-002 REV./DATE 2008 TECHNIQUE NO. LT-TECH2 REV./DATE 2005  
PART NO. SEE RESULTS MATERIAL Aluminum THICKNESS VARIOUS  
SCOPE A WET FLOUORESCENT DYE INSPECTION WAS COMPLETED ON THE 100% OF THE SURFACE ONLY.

TEST DETAILS  
METHOD ☒ FLUORESCENT ☐ VISIBLE ☒ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED  
FAMILY BRAND WASNAFLUX BLACK LIGHT S/N 16459 ☐ OUTPUT > 1000  $\mu$ W/cm<sup>2</sup> ☐ AMBIENT < 2 fc  
PENETRANT ZL67 MINIMUM DWELL TIME 45 MIN. LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ SURFACE  
PENETRANT REMOVER H2O MINIMUM DRY TIME >10 MIN. OTHER LABINO  
DEVELOPER SKD S2 MINIMUM DWELL TIME 10 MIN. LIGHT METER S/N \_\_\_\_\_ CAL DUE DATE \_\_\_\_\_  
DEVELOPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY

TEST SURFACE  
SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☒ MACHINED ☐ SHOT BLASTED ☒ CLEAN BARE METAL  
SURFACE TEMPERATURE ☐ < - 4°C/ 20°F ☐ - 4°C/ 20°F TO 10°C/50°F ☒ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F

RESULTS- ( <input type="checkbox"/> METRIC <input checked="" type="checkbox"/> IMPERIAL )		COMMENTS	ACCEPT	REJECT
3	-	KAPPEL - W.O.# 100434	✓	
1	-	CROSS TUBE - W.O.# 70522	✓	
1	-	" " " " - 70199	✓	
1	-	" " " " - 70198	✓	
1	-	" " " " - 70521	✓	
1	-	" " " " - 102502	✓	
1	-	" " " " - 100942	✓	
M/13.06.25				

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Standard of Care  
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES  
CLIENT REPRESENTATIVE Matthew Murdoch DTR # E-20332  
TECHNICIAN (SIGNATURE): Mike Liharsen REPORT REVIEWED BY: \_\_\_\_\_  
NAME (PRINT): Mike Liharsen NAME INITIALS  
1<sup>st</sup> TECHNICIAN CGSB LEVEL II SNT LEVEL \_\_\_\_\_ CGSB REG. NO. 6606  
2<sup>nd</sup> TECHNICIAN CGSB LEVEL \_\_\_\_\_ SNT LEVEL \_\_\_\_\_ CGSB REG. NO. \_\_\_\_\_

